STONE COUNTY SOIL & WATER CONSERVATION DISTRICT

The existence of man depends on six inches of topsoil & the water that falls on it……Save them

Newsletter

May 2015

Facts about America's Farmers

Every day, America's farm families rise to meet the challenge of feeding and clothing the world. Satisfying world demand is exactly what they do. America sends her bounty all over the world, and it all starts on family farms.

To these men and women, the land is more than a livelihood – it's a legacy. It's a resource to be cared for, preserved, improved and passed to the next generation. They're the caretakers of our land. They make their living from it. They provide for us with it.

In some way, we're all connected to agriculture. Learn more about what America's farmers provide for us every day.

U.S. Farm Facts

- To keep up with population growth more food will have to be produced in the next 50 years as the past 10,000 years combined.
- Today, the average U.S. farmer feeds 155 people. In 1960, a farmer fed just 26 people.
- Today's farmer grows twice as much food as their parents did – using less land, energy, water and fewer emissions.
- American farmers ship more than $100 billion of their crops and products to many nations.
- U.S. farmers produce about 40 percent of the world's corn, using only 20 percent of the total area harvested in the world.
- Farmers are a direct lifeline to more than 24 million U.S. jobs in all kinds of industries.

Sources of Information: USDA ERS, FAO, EPA, USDA Census of Ag, USDA FAS *and* NCGA

FEED THE SOIL FEED THE PLANT FEED THE ANIMAL

Soil Works For You, If You Work For the Soil

Soil is a living and life-giving substance, without which we would perish http://www.nrcs.usda.gov/wps/portal/nrcs/main/mo/soils/health/

By farming using soil health principles and practices like no-till, cover cropping and diverse rotations, farmers are actually increasing organic matter in their soil, increasing microbial activity, sequestering more carbon, improving wildlife and pollinator habitat—all while harvesting better profits and often better yields. Off-the-farm, these practices are improving water and air quality, too. And that's good news for all of us on Earth Day 2015. Changing from "conventional farming" to "regenerative farming," focusing on soil health. Farmers are recognizing that soil is alive, and that the microbes in the soil are critical "business partners," & should be protected. Farm in ways to improve the health of your living soil.

If you have received this publication in error or wish to be removed from the mailing list please call 417-723-8389.

In This Issue:

The Miracle under our feet, holds the promise of our future. We are all connected to the soil.

SOIL HEALTH MATTERS

CONSERVATION PROGRAM HELPS IMPROVE SOIL & WATER QUALITY

The Missouri Dept. of Natural Resources, Soil and Water Conservation Program assists agricultural landowners in soil and water conservation practices that not only improve the environment, but also increases land productivity. The SWCP operates on half of the 1/10% sales tax from the Parks, Soils & Waters Sales Tax. Landowners receive financial incentives to implement these practices that help prevent soil erosion and protect water resources. The other half is utilized by the State Parks.

"Farmers and livestock producers are conservationists who care about the land and want to protect it, not only for their benefit but that of the next generation of farmers and beyond," states Colleen Meredith, director of the Mo. Soil & Water Conservation Program. She goes on to state that agriculturalists are good stewards of the land and, overall, it helps everyone in the state because its a program to assist with funds and technical support for the land and water improvement. When the tax was put in place in 1984, Missouri ranked 2nd in the nation for the highest rate of erosion. Meredith states now that Missouri could claim the highest reduction rate of erosion compared to other states with 10 million acres of cultivated cropland.

SWCP is fostering good relationships with landowners through the local county soil & water offices. The program has seven different resource concerns with 50 various practices statewide. The areas include: Nutrient & Pest Management, Woodland Erosion, Animal Waste Management, Grazing Management, Sensitive Areas, Sheet, Rill & Gully Erosion and Irrigation Management. For instance, a livestock producer could find themselves beginning a SWCP project dealing with a seeding practice based on soil loss. Later, they see a need to start a nutrient and pest management plan on another field and then sees the need to fence off a stream to protect water quality and allow a natural riparian buffer to grow and protect the banks while filtering runoff. This then could lead into a managed grazing system molding many practices together to benefit the land while improving their production leading to less inputs down the road. The landowner agrees to a maintenance plan as part of the contract; which is a commitment to maintain that practice for five to 10 years depending on the practice itself. This again, is a testament to their commitment to the land.

"Since the induction of the tax in 1984, 176 million tons of soil has been saved, there have been 100 watershed projects and $635 million dollars given out to producers with 200,000 contracts with landowners, all on a voluntary basis," Meredith said.

We are all in this together as citizens, landowners and anyone partaking in the natural resources that Missouri has to offer. It's our responsibility to leave the land in better shape tomorrow than it was today. As the statistics show, Missouri landowners should be proud of the progress that's taken place over the last 31 yrs. with the assistance of the SWCP funds.

Stone Co. SWCP

Kevin Wray -District Technician

Melissa White - District Manager

Working 4 U

723-8389

Partnering for Natural Resources

WATER CRITICAL ELEMENT FOR GRAZING MANAGEMENT

A US liquid gallon of water weighs about 8.34 pounds

A grazing animal's water requirements depends on several factors, including species of livestock, air temperature, physiological stage of production, moisture content of the diet, and distance the animal must travel to water. In cattle, dairy breeds typically have a higher daily water intake than beef breeds due to high water content of milk. Water intake per lb. dry matter intake by sheep may be as much as 40% less than for beef cattle. As with cattle, high milk producing sheep breeds require more than less productive breeds.

Increasing air temperature raises the water intake of most grazing animals. As temperature increases from 50—90 degrees F, water consumption by beef cattle will more than double. Contrary to popular belief, animals prefer to drink water that is near the normal rumen temperature of 100—102 degrees F, even in hot weather. Age of cattle affects amount consumed. Mature beef cows will consume only about 3-5 lbs. of water per lb. of dry matter intake, while calves will consume 5-7 lbs. per lb. dry matter. Lactating females will consume higher amounts than non-lactating females. Increased intake by the lactating females correlates to the level of milk production as well. The nutrient requirements of livestock vary depending on environmental conditions, age, breed, & stage of production. An example: 800 lb. replacement heifer gaining 1.5 lbs /day has a higher daily net energy intake requirement than a 1200 lb. dry pregnant cow at maintenance.

The shorter the distance to water, the higher their daily intake of water will be. When traveling distances of 900 + feet, utilization of standing forages decreases. Designing a water system for your grazing operation should evaluate several options. Having multiple watering tanks in grazing operations is advantageous.

Chart: Intake of dairy heifers

Air T emp. (degrees F)	Lb water / lb TDN	Lb TDN/day	Gal. water/day
35	4.7	10.3	5.8
50	5.2	9.2	5.7
70	7.2	9.2	7.9
80	9	8.8	9.5
90	22.2	6.6	17.6
95	24.8	6.4	19

IMPORTANT AG LEGISLATION SIGNED BY GOVERNOR NIXON

Two important pieces of agriculture legislation was signed into law at a family dairy farm in Purdy, MO SB 12, the Ag Omnibus bill & HB 259, the Dairy Revitalization Act. This will enhance the ability of Mo. farms to be more efficient & productive. "Agriculture is the state's largest industry & these bills will help ensure it remains strong.," says Mo. Farm Bureau president, Blake Hurst. The Ag Omnibus bill increases weight limits for trucks hauling livestock to 85,500 lbs. year round & increases weights for hauling grain by 10% during harvest. It also repeals state law that currently prohibits beef producers in Mo. from voting on instituting a state beef checkoff. Nixon said, "Last fall, Mo. farmers saw record harvests throughout the state, but our existing weight limits hampered the ability of Mo. farmers & producers to get the job done. The Dairy Revitalization Act includes 3 provisions to bolster the dairy industry. 1) provides federal insurance premium payment aid for dairy farmers 2) a scholarship program for college students going into dairy industry; up to #80 $5,000 scholarships will be awarded annually 3) and it includes the creation of a dairy innovation center to help the Mo. dairy industry grow. "Missouri's dairy industry supports more than 23,000 jobs & contributes $2 billion to our state's GDP," Nixon said. "By supporting our dairy farmers & encouraging more young people to pursue careers in agriculture, the Dairy Revitalization Act will yield tremendous benefits."

"It is our philosophy that an ounce of prevention is worth a pound of cure."

BROOMSEDGE & PEST QUIZ

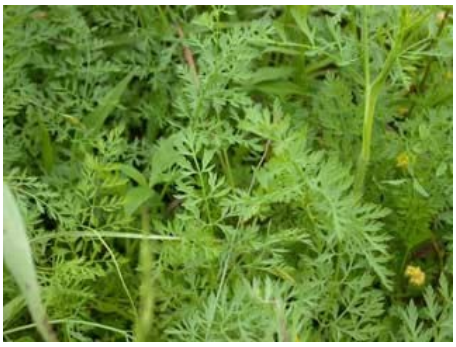
The secret of getting ahead is getting started." ~ Mark Twain

I was recently reading an article on what to do about your Broomsedge now. It certainly sticks out like a sore thumb contrasting against the new green spring growth. Broomsedge has been referenced as "poverty grass." Livestock do not like to eat it due to its poor quality, especially when its mature. At best, it is about half the quality of desired forages. It is not worth the cows trouble for the most part. But on occasion, cattle will sometimes consume a little mature broomsedge along with very high protein watery forage in the early spring to help balance their rumen. They will also consume it fairly well prior to early boot, but it is still far from being a choice feed.

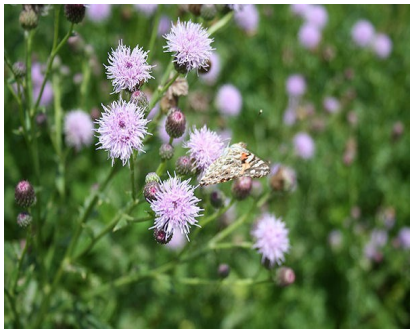
Broomsedge can get the upper hand in pastures that have low phosphorus levels and/or low pH combined with low calcium. It tends to be worse on thinner, more eroded soils which too are more acidic. Low pH aggravates the phosphorus issue even more by tying up even more phosphorus. So, the fix is to combat the fertility deficiencies, especially the phosphorus and calcium. This will be the first place to start to overcome this intrusive species. I would suggest first, a soil test. And besides we don't want mature broomsedge to take up nutrients available to other needed plants or block sunlight from other species we want growing. By removing mature broomsedge by clipping it perhaps and then fertilizing the cool-season desired forages, you shift the advantage back to the cool-season. Its all about competition. What a difference good cover & fertility makes when it comes to weed control. Most weeds are opportunists, just waiting for the right condition and opportunity for growth.

You won't remove it all at once, but will be headed in the right direction. Increasing fertility can come in different forms. Even feeding hay a portion of the winter when needed in these problem areas can add fertility to the site and increase organic matter. Manure can also be useful in reducing its foot hold as a means of adding some needed fertility. You also get better manure distribution with proper grazing rotations of livestock through paddocks.

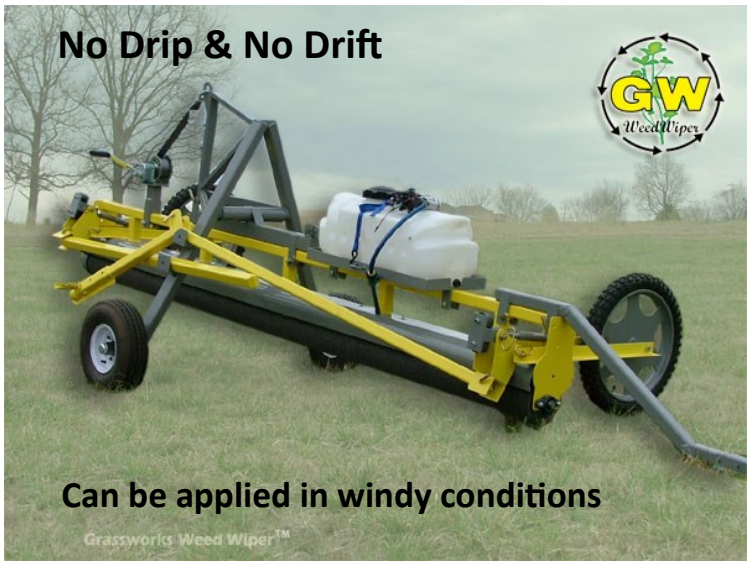
PEST QUIZ



Answers are on page 6



New Ag-Equipment



The Stone Co SWCD is in the process of purchasing this **new heavy duty 12' pull type Weed Wiper**. It has a 25 gall. tank which does a standard of 30-50 acres. Can pull with a vehicle, tractor, 450-500 cc utility vehicle. Has a 2 1/4" ball hitch. Adjusts from ground height up to 26". Ideal for wiping weeds that you have not yet gotten under control, perhaps thistles, or summer ragweed, pigweed or Johnson grass while not harming your legumes. **Saving Labor + Chemical= More Profit & Excellent Results.**

Ag-Legislation

Statement by Bob Stallman, President, American Farm Bureau Federation, Regarding Passage of House WOTUS Legislation (WOTUS—Waters of the US)

WASHINGTON, D.C., May 12, 2015 – "Members of the House today sent a strong, bipartisan message that the flawed Waters of the U.S. Rule is unacceptable and should be scrapped. Furthermore, it was refreshing to see members of Congress order regulators back to the drawing board, with an admonition to listen to the very real concerns of people who would have their farm fields and ditches regulated in the same manner as navigable streams.

"The way that the Environmental Protection Agency and the Army Corps of Engineers drew up the WOTUS rule, it was more about regulating land than it ever was about protecting valuable water resources. Farmers and ranchers know all about the importance of protecting water, and they will continue to put that belief into practice. Through cooperative conservation measures, we have helped cut land erosion by more than 50 percent in just the last 20 years. We have reduced pesticide use and today use technology to apply just the right amount of fertilizer at just the right time. We look forward to a new water rule that recognizes the enormous work we have done, and honors the limits authorized by Congress and the Supreme Court."

Farm Bureau Applauds Senate Move to Stop EPA Overreach

WASHINGTON, D.C., April 30, 2015 – The American Farm Bureau Federation praised the bipartisan leadership of Sens. John Barrasso (R-Wyo.) and Joe Donnelly (D-Ind.) today as they introduced the Federal Water Quality Protection Act, which would put in check the Environmental Protection Agency and its attempt to broaden the definition of "waters of the U.S."

"Tens of thousands of farmers, ranchers and land owners have spoken out, but EPA has yet to fully acknowledge the proposal's potential impact on everyday farming activities," AFBF President Bob Stallman said. "We work hard every day to minimize the environmental impact of raising the food, fuel and fiber we all consume. We're grateful that our congressional representatives are paving the way to safeguard both farmers and their land."

Farm Bureau is urging Congress to act swiftly, before the rule is final, so agencies can re-craft the rule to ensure it is practical and addresses the concerns of farmers, ranchers and business owners across the country.

Ag-Ceptional

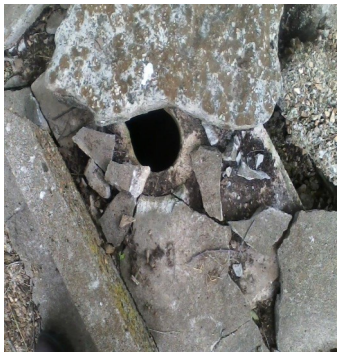
SHOW ME AGRI-CULTURE

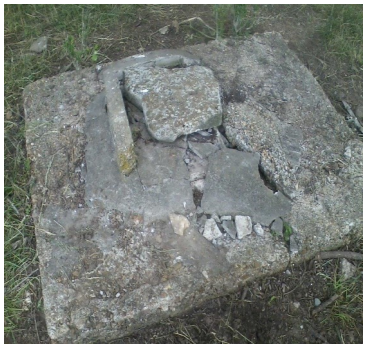
The High Paced Event By: Kailee Essary

Spending hours heavily anticipating the next bargains to be purchased, the stockyards are like a gamble when the stakes are high. The lingering fragrance of cow manure, chewing tobacco, and brief whiffs of the daily special linger. The room is filled with different types of cattlemen waiting for their fortune to be made, or next loan to be spent. Your eyes wonder around trails of manure leading the way to the café, and down the stairs. They all wait for the best deal of the day to come strutting through the ring. The prize is unveiled the midnight black bull with droopy ears, he matches the scale, and twirls around. The auctioneer is rambling on, whooping with glee, working to make the sale. The cattlemen all in awe of the investment at hand, glances and stares across the ring searching to see who now poses the grand prize. The doors clang shut, and the chance is gone the next set of cattle impatiently shuffling waiting their turn to have a chance to be sold. Many early mornings and late nights spent enjoying the high paced event, watching cattle, and money spent.

PRACTICE SPOTLIGHT

The Soil & Water District provides cost share assistance for decommissioning wells; $400. We would like to see more abandoned wells in the county become decommissioned. We have worked with several landowners already who have helped to address this liability. If you would like a field visit, we would be glad to come out. Just call us at 723-8389 Lets work together to prevent contamination to our ground water.





ANSWERS Pg.4: Left to Right: 1) Poison Hemlock Stem 2) Queen Anne's Lace Bloom 3)Q.A. Lace leaf (wild carrot) 4)Canada Thistle 5) Giant Ragweed 6) Waterhemp—a pigweed related plant 7)Marestail 8) Morningglory 9) Palmer Amaranth

State law requires landowners to plug abandoned wells - David Burton- University of Mo. Extension

There may be as many as one abandoned well or cistern for every 80 acres of land in Missouri. That translates to over 4,700 old wells or cisterns in most counties of southern Missouri. "These old wells were once an asset, but they can become a serious liability," said Bob Schultheis, natural resource engineering specialist, University of Missouri Extension.

There are two major hazards associated with abandoned wells and cisterns: someone falling in and the potential to be a source of contamination for the underground aquifer or neighboring wells. "A well is considered abandoned when it can no longer be used or when it has not been in use for two years or more. It is the responsibility of the landowner to plug any abandoned wells on their property," said Schultheis.

State regulations allow landowners to plug wells on their property as long as they do so in accordance with the Missouri Well Construction Rules. "I've seen several situations where a new well tested bad for bacteria until the old well, several hundred feet away, is plugged. Because of the fractured nature of Ozarks underground rocks, it's possible to pollute another person's water supply several miles away," said Schultheis.

Plugging typically costs $300 to $1,200, depending upon the type and depth of the well and whether a contractor is involved. Abandoned dug-wells and cisterns can be plugged by pushing in the upper three feet of the well lining, and then filling the well to within three feet of the surface with chlorinated clean fill, such as coarse gravel, rock or varied-size agricultural lime or sand. The rest of the well should then be capped with clay-rich soil, mounded to allow for settling and to make sure surface water drains away.

To plug a drilled bedrock well properly, a person needs to know the total depth, length of casing and depth to water. The pump should be removed and the casing cut off three feet below the ground surface. Chlorinated clean gravel, or varied-size agricultural lime, is added from the bottom of the well to 50 feet below the bottom of the casing.

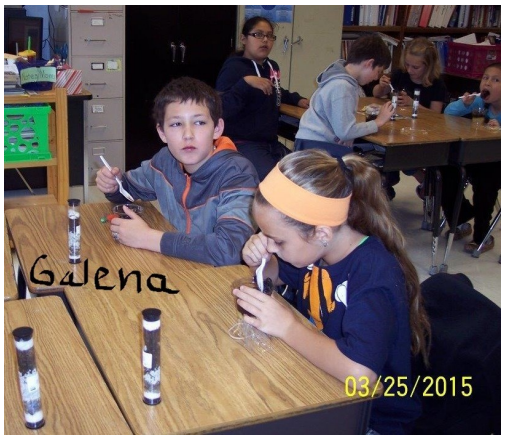
Either neat-cement grout (a mixture of six gallons of water per 94-pound bag of Portland cement), bentonite grout (a bentonite-water slurry), or chipped bentonite clay is then added to fill the hole to within two feet of the ground surface. The neat-cement or bentonite grout must be pumped to the bottom of the well, displacing any water out the top. The chipped bentonite clay, which swells when wet, can be slowly poured through standing water. The final two feet of the hole is then capped with clay-rich soil.

For more information on plugging wells, contact the Missouri Department of Natural Resources' Wellhead Protection Section at 573-368-2165. Bob Schultheis can be reached by telephone at 417-859-2044 or by email schultheisr@missouri.edu.

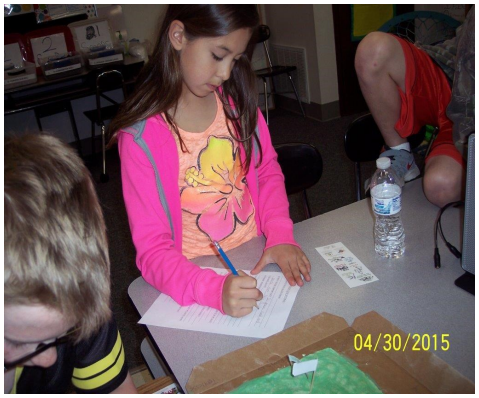
Soil Education on the Move

LOCAL 4TH GRADERS LEARN ABOUT SOIL PROFILES

We would like to say thank you to the Stone County fourth grade classes for participating in our Info-Ed demonstrations this spring. We believe that the children of the present, are the leaders of the future. The majority of America's consumers are disconnected from agriculture in that most have no idea of where their food comes from. In the last 50 years, the disconnect between people and their food has grown exponentially in relationship to the number of people who are no longer working in agriculture. As little as 60 years ago, over half of the people in the U.S. were involved in agriculture. Today, that number has dropped to 2%. Our info-ed demonstration helps the students understand the purpose of soil, how soil is made, and what comes from soil. The students also enjoy receiving their own "edible" soil profile. THANK YOU TEACHERS FOR ALLOWING US TO REACH OUT TO YOUR STUDENTS! IT WOULDN'T HAPPEN WITHOUT YOUR INVOLVEMENT.



4th graders at Galena enjoying their edible soil profile !!



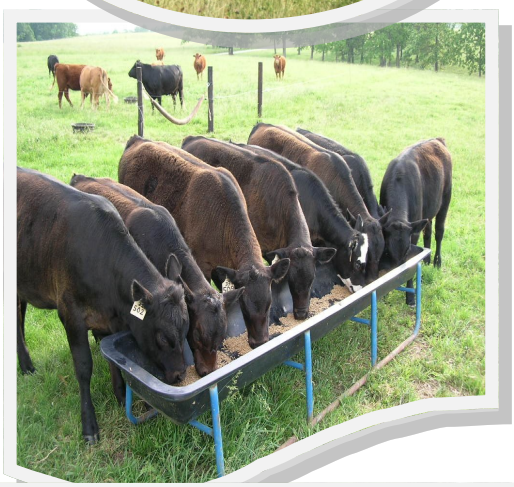
A student from Hurley completing her post test after the demonstration.

A Pre & Post Test was given to students .

Speak up for Ag

Only 2% of the population is involved with farming. Farmer's have to be focused on our customers and our customers are everyone who doesn't farm.

No doubt we are outnumbered and we have a lot of mouths to feed and many to educate about our profession. What happens today, paves the way of the future. Let's stay involved and share our story about agriculture with others. Put a face to Agriculture. Our customers need this understanding to better support & vote on issues even surrounding this livelihood.



STONE COUNTY SOIL & WATER CONSERVATION DISTRICT

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Managed Grazing Systems—A win - win situation, increasing productivity and profits for the operator while improving water quality and soil health. A producer can match grazing to plant growth, it gives a period of rest & regrowth, thus increasing both forage & animal production; fields can be set aside for haying and/or stockpiling. Cost share programs can help defray some upfront costs of fencing & water supplies. Another win - win reason.

SW– MO. Regional Grazing Schools Schedule

LOCATION:	DATES:	CONTACTS:
Halfway	April 21,24,28, May 1, (evening) Apr.25 Sat.-Day	Dallas Co. SWCD 345-2312
Mt. Vernon	Apr. 28,29, 30th (Day)	Law. Co. Ext. at 466-3102
Neosho	June 9,10,11 (Day)	Nathan Witt 451-1007
Greenfield	April 19, 2015, Sat (Day) Sept.15,17,22,24 -(Evening)	Cedar Co. SWCD 276-3388 ext. 3
Crane	Sept. 16,17,18, (Day)	Stone Co. SWCD 723-8389
Marshfield	Sept. 22,23,24, 2015 (Day)	Webster Co. SWCD 468-4176, ext. 3
Bois D'Arc	Oct. 20,21,22, 2015 (Day)	Greene Co. SWCD 831-5246 ext. 3

Ag-Ceptional

FAMILY FARMS—THE FOCUS OF NEW AG CENSUS DATA

The U.S. Dept. of Ag's National Statistics Service reports that family owned farms remain the backbone of the ag industry.

What they found is that family owned businesses, while very diverse, are at the core of the U.S. agriculture industry. In fact, 97% of all U.S. farms are family-owned. By definition, a family farm is any farm where the majority of the business is owned by the operator & individulas related to the operator, including through blood, marriage, or adoption. Key highlights of the census data are:

1) Food equals family - 97% of the 2.1 million farms in U.S. are family owned.
2) Small business matters - 88% of all U.S. farms are Small family farms.
3) Big business matters too - 64% of all vegetable sales & 66% of all dairy sales come from the 3% of farms that are large or very large family farms
4) Local connections come in small packages - 58% of all direct farm sales to consumers come from small family farms
5) Farming provides new beginnings - 18% of principle operators on family farms in the U.S. started within the last 10 years.

I think we get the picture; Family Farms are the Backbone.

America's Farmers….Everyday Environmentalists

Farmers should consider themselves as environmentalists, for the steps they take to improve the environment aren't new; just like Earth Day, they have been around for many decades. In fact, as long as livestock has been raised on their land, the families have worked as good stewards to protect and enhance the environment.

Sustainability means ensuring that the land will provide for the next generations by focusing on the well-being of their animals and maintaining the natural resources on their land. Farmers employ a variety of environmentally friendly practices, realizing these practices are responsible for land preservation that is essential to maintain. Taking care of the land – will take care of you.

Farmers have been "going green" long before this was even a cool thought. Here are some ways in which the farmer has & can continue to help the environment:

- Maintain proper nutrients in soil by regularly analyzing samples to determine need.
- Use biological control on invasive pests along with managed chemical applications.
- Plant trees for windbreaks or riparian buffers.
- Decommission old abandoned wells or cisterns for primary purpose of water quality.
- Implement conservation tillage to conserve soil and moisture.
- Fence off streams to create a buffer to help prevent bank erosion and control runoff.
- Plant grasses on highly erodible land, conserving soil.
- Maintain better quality forages by proper rotation of livestock
- Better utilization of manure for nutrients by livestock rotation.
- Plan nutrient management systems, minimizing runoff, providing only what plants need.
- Plan for warm season grasses; providing quality forage during summer for livestock.
- Recycle materials such as feed bags, plastics, batteries, motor oil, tires, scrap metal, etc.
- Provide habitat for wildlife – field feathering, tree/shrub plantings, promoting pollinators
- Participate in university research projects that aim to improve agricultural environmental practices.
- Partner with state, local and federal agencies for BMP's.